

NRC Form 313 I (12-81) 10 CFR 30		U.S. NUCLEAR REGULATORY COMMISSION		1. APPLICATION FOR: <i>(Check and/or complete as appropriate)</i>	
APPLICATION FOR BYPRODUCT MATERIAL LICENSE INDUSTRIAL				X	a. NEW LICENSE
See attached instructions for details. Completed applications are filed in duplicate with the Division of Fuel Cycle and Material Safety, Office of Nuclear Material Safety, and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555 or applications may be filed in person at the Commission's office at 1717 H Street, NW, Washington, D. C. or 7915 Eastern Avenue, Silver Spring, Maryland.				b. AMENDMENT TO: LICENSE NUMBER	
				c. RENEWAL OF: LICENSE NUMBER	
2. APPLICANT'S NAME <i>(Institution, firm, person, etc.)</i> ADMIRALTY TESTING SERVICES TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION (907-257-5739)			3. NAME AND TITLE OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION MARK T. JOHNSON TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION (907-257-5739)		
4. APPLICANT'S MAILING ADDRESS <i>(Include Zip Code)</i> <i>(Address to which NRC correspondence, notices, bulletins, etc., should be sent.)</i> 200 west 34th #613 Anchorage, Alaska 99503			5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED <i>(Include Zip Code)</i> 937 8th Ave (plus, various Anchorage, Ak 99501 Ak. jobsites)		
(IF MORE SPACE IS NEEDED FOR ANY ITEM, USE ADDITIONAL PROPERLY KEYED PAGES.)					
6. INDIVIDUAL(S) WHO WILL USE OR DIRECTLY SUPERVISE THE USE OF LICENSED MATERIAL <i>(See Items 16 and 17 for required training and experience of each individual named below)</i>					
FULL NAME			TITLE		
a. Mark T. Johnson			President		
b. R. Mark Hansen P.E.			Senior Materials Engineer		
c. David K. Johnson			Materials Technician		
7. RADIATION PROTECTION OFFICER Mark T. Johnson			Attach a resume of person's training and experience as outlined in Items 16 and 17 and describe his responsibilities under Item 15.		
8. LICENSED MATERIAL					
L I N E	ELEMENT AND MASS NUMBER	CHEMICAL AND/OR PHYSICAL FORM	NAME OF MANUFACTURER AND MODEL NUMBER <i>(If Sealed Source)</i>	MAXIMUM NUMBER OF MILLICURIES AND/OR SEALED SOURCES AND MAXIMUM ACTI- VITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME	
NO.	A	B	C	D	
(1)	Cesium 137	Sealed Source	Troxler #a-102112	two sources 8mCi(ea)	
(2)	Americium 241	Sealed Source	Troxler #a-102541	two sources 8mCi(ea)	
(3)					
(4)	8801280011 870827 REG5 LIC30	PDR			
DESCRIBE USE OF LICENSED MATERIAL E					
(1)	Sealed in two Troxler Electronic Laboratories Inc. Model 3411-b				
(2)	surface gauges, which will be used to measure moisture and density				
(3)	of engineering materials.				
(4)					

9. STORAGE OF SEALED SOURCES

LINE NO.	CONTAINER AND/OR DEVICE IN WHICH EACH SEALED SOURCE WILL BE STORED OR USED. A.	NAME OF MANUFACTURER B.	MODEL NUMBER C.
(1)	Portable moisture-density gauge	Troxler Electronic lab	3411- B
(2)			
(3)			
(4)			

10. RADIATION DETECTION INSTRUMENTS

LINE NO.	TYPE OF INSTRUMENT A.	MANUFACTURER'S NAME B.	MODEL NUMBER C.	NUMBER AVAILABLE D.	RADIATION DETECTED (alpha, beta, gamma, neutron) E.	SENSITIVITY RANGE (milliroentgens/hour or counts/minute) F.
(1)	N/a					
(2)						
(3)						
(4)						

11. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 10

☐ a. CALIBRATED BY SERVICE COMPANY

NAME, ADDRESS, AND FREQUENCY

N/A

☐ b. CALIBRATED BY APPLICANT

Attach a separate sheet describing method, frequency and standards used for calibrating instruments.

12. PERSONNEL MONITORING DEVICES

TYPE (Check and/or complete as appropriate.) A.	SUPPLIER (Service Company) B.	EXCHANGE FREQUENCY C.
<input type="checkbox"/> (1) FILM BADGE <input type="checkbox"/> (2) THERMOLUMINESCENCE DOSIMETER (TLD) <input type="checkbox"/> (3) OTHER (Specify): _____ _____ _____	R.S. Landauer, Jr. & Company	<input checked="" type="checkbox"/> MONTHLY <input type="checkbox"/> QUARTERLY <input type="checkbox"/> OTHER (Specify): _____ _____ _____

13. FACILITIES AND EQUIPMENT (Check where appropriate and attach annotated sketch(es) and description(s).)

- ☐ a. LABORATORY FACILITIES, PLANT FACILITIES, FUME HOODS (Include filtration, if any), ETC.
☒ b. STORAGE FACILITIES, CONTAINERS, SPECIAL SHIELDING (fixed and/or temporary), ETC.
☐ c. REMOTE HANDLING TOOLS OR EQUIPMENT, ETC.
☐ d. RESPIRATORY PROTECTIVE EQUIPMENT, ETC.

14. WASTE DISPOSAL

a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED

Source Will be returned to manufacturer

b. IF COMMERCIAL WASTE DISPOSAL SERVICE IS NOT EMPLOYED, SUBMIT A DETAILED DESCRIPTION OF METHODS WHICH WILL BE USED FOR DISPOSING OF RADIOACTIVE WASTES AND ESTIMATES OF THE TYPE AND AMOUNT OF ACTIVITY INVOLVED. IF THE APPLICATION IS FOR SEALED SOURCES AND DEVICES AND THEY WILL BE RETURNED TO THE MANUFACTURER, SO STATE.

INFORMATION REQUIRED FOR ITEMS 15, 16 AND 17

Describe in detail the information required for Items 15, 16 and 17. Begin each item on a separate page and key to the application as follows:

15. **RADIATION PROTECTION PROGRAM.** Describe the radiation protection program as appropriate for the material to be used including the duties and responsibilities of the Radiation Protection Officer, control measures, bioassay procedures (*if needed*), day-to-day general safety instruction to be followed, etc. If the application is for sealed source's also submit leak testing procedures, or if leak testing will be performed using a leak test kit, specify manufacturer and model number of the leak test kit.
16. **FORMAL TRAINING IN RADIATION SAFETY.** Attach a resume for each individual named in Items 6 and 7. Describe individual's formal training in the following areas where applicable. Include the name of person or institution providing the training, duration of training, when training was received, etc.
 - a. Principles and practices of radiation protection.
 - b. Radioactivity measurement standardization and monitoring techniques and instruments.
 - c. Mathematics and calculations basic to the use and measurement of radioactivity.
 - d. Biological effects of radiation.
17. **EXPERIENCE.** Attach a resume for each individual named in Items 6 and 7. Describe individual's work experience with radiation, including where experience was obtained. Work experience or on-the-job training should be commensurate with the proposed use. Include list of radioisotopes and maximum activity of each used.

18. CERTIFICATE

(This item must be completed by applicant)

The applicant and any official executing this certificate on behalf of the applicant named in Item 2, certify that this application is prepared in conformity with Title 10, Code of Federal Regulations, Part 30, and that all information contained herein, including any supplements attached hereto, is true and correct to the best of our knowledge and belief.

WARNING.—18 U.S.C., Section 1001; Act of June 25, 1948; 62 Stat. 749; makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

a. LICENSE FEE REQUIRED
(See Section 170.31, 10 CFR 170)

\$110.00

b. CERTIFYING OFFICIAL (Signature)

Mark T. Johnson

c. NAME (Type or print)
Mark T. Johnson

(1) LICENSE FEE CATEGORY:

3-L

d. TITLE

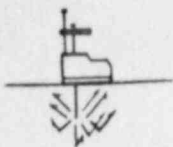
President

(2) LICENSE FEE ENCLOSED: \$

\$110.00

e. DATE

7-23-87



ADMIRALTY TESTING SERVICES

Construction Materials Testing

200 W. 34th St. #613 Anchorage, Alaska 99503

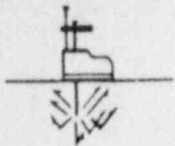


MODEL RADIATION SAFETY PROGRAM

A. SAFETY PROCEDURES

1. Do not operate or attempt to operate a gauge unless you have been authorized to do so.
2. Do not attempt to repair, modify or open the sealed source under any circumstances.
3. Wear a film badge at all times while operating or transporting a gauge.
4. Follow operating procedures, when using the gauge, in accordance with the Troxler instruction manual, the radiation control regulations and this safety program.
5. Keep unauthorized persons away from the gauge.
6. Do not leave the gauge unattended when in use or outside of the storage enclosure or locked vehicle.
7. Keep the gauge in the "SAFE" or storage position when not in use.
8. Be sure that the gauge is locked within an authorized enclosure (e.g. closet, cabinet, vehicle, etc.) when it is not in use. Security against the theft of a radioisotope is of utmost importance and must not be neglected. The storage enclosure must be labeled with a radiation warning sign bearing the symbol as described in 10 CFR 20.203 and the words "CAUTION RADIOACTIVE MATERIALS".
9. Gauge(s) may be only transported by authorized personnel in approved vehicles. The gauge(s) may not be transported on the front or rear seats of any vehicle. If a pickup truck is used the gauge(s) must be locked in an enclosure (e.g. cabinet, shipping case, etc.) and the enclosure tied securely (e.g. chained, bolted, etc.) to the body of the truck in order to prevent loss or theft.
10. Ensure that the gauge is leak tested at the intervals required by the licensee's Radioactive Materials License. The wipe sample will be collected by the Radiation Protection Officer using a Troxler Model 3880 leak test kit. The leak test measurement on the wipe sample will be performed by Troxler Electronic Laboratories, Inc., P.O. Box 12057, Research Triangle Park, NC 27709.
11. When in doubt, ask your Radiation Protection Officer.

70635



ADMIRALTY TESTING SERVICES

Construction Materials Testing

200 W. 34th St. #613 Anchorage, Alaska 99503

Page 2



B. EMERGENCY PROCEDURES

1. Accidents

- a. In the event of possible damage to source or source control mechanism, the operator will keep unauthorized persons at least ten feet from gauge and prevent removal of gauge from site until authorized by RPO or appropriate authority.
- b. If there is any possibility the source capsule might be ruptured, the location must be covered by a sheet of material (plastic, tarp, etc.), held down by weights (rocks, bags of material, etc.) to prevent scattering of radioactive material by the elements.
- c. The operator will then immediately notify his RPO of the incident and give an appraisal of the probable condition of the source.
- d. The RPO will then immediately notify the following authority who will provide instructions and assistance in accordance with the circumstances of the incident.

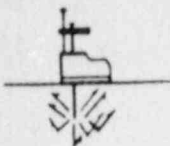
Region V, USNRC
Office of Inspection and Enforcement
1990 N. California Blvd., Suite 202
Walnut Creek, CA 94596
(415) 486-3141 - daytime, nights and holidays

2. Source stolen or lost

- a. The operator must immediately notify local police or other law enforcement agency within whose jurisdiction the incident occurred.
- b. The operator must also notify his RPO who will notify the authority listed in item B-1-d above.

C. DUTIES OF THE RADIATION PROTECTION OFFICER

1. Assure compliance with all pertinent parts of the controlling agency's (NRC or agreement state as applicable) regulations.
2. Assure compliance with the conditions in licensee's Radioactive Materials license and amendments and above items given in this safety program.
3. Maintain the following items in a radiation file and keep available for inspection by controlling agency if requested.
 - a. Current Radioactive Materials License.
 - b. Copies of license application, attachments and all pertinent correspondence referred to in the conditions of the license and amendments.



ADMIRALTY TESTING SERVICES

Construction Materials Testing

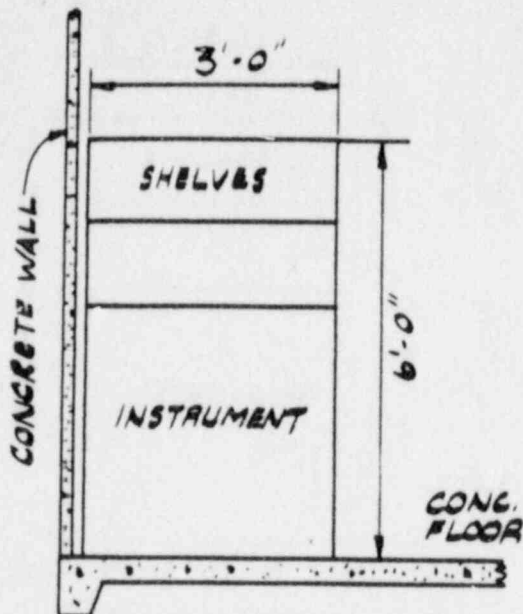
200 W. 34th St. #613

Anchorage, Alaska 99503

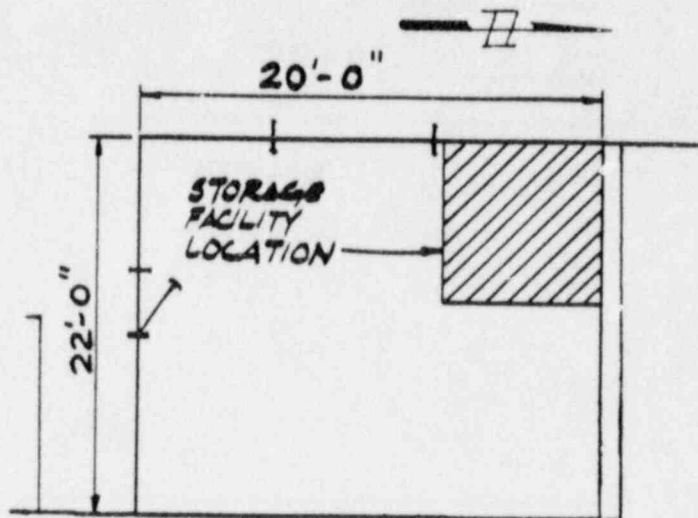
Page 3



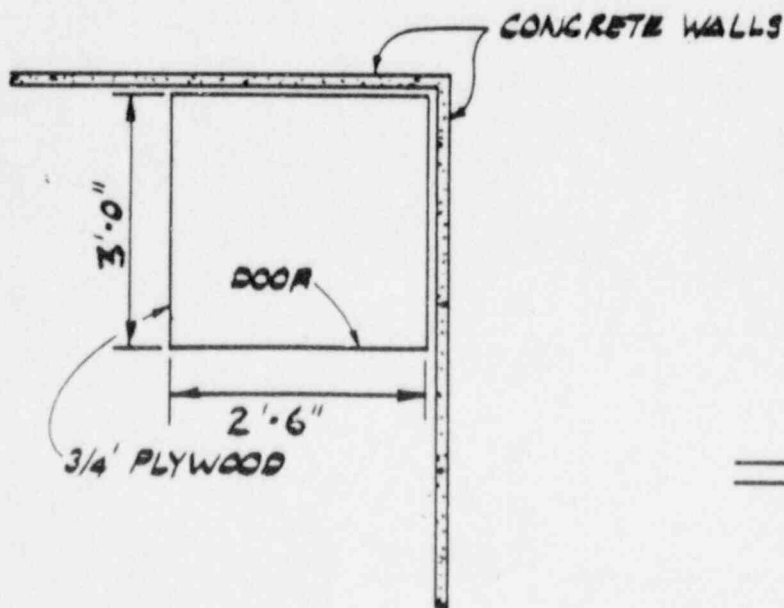
- c. Gauge Source Certificate(s) issued with the gauge(s) by the manufacturer.
- d. Film badge or TLD reports.
- e. Leak test reports.
- f. Records concerning disposal, inventory and useage of source(s).
- g. Copies of this safety program.
- h. A current copy of the controlling agency's regulations.



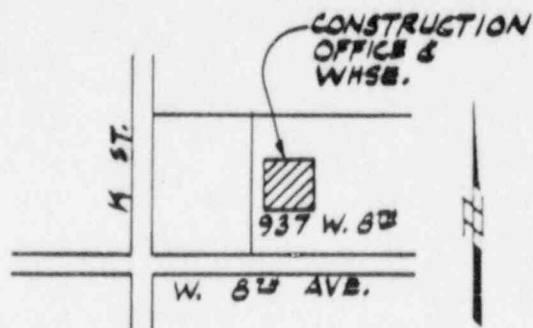
ELEVATION
N.T.S.



LABORATORY STORAGE
ROOM PLAN
N.T.S.



PLAN
N.T.S.



LOCATION PLAN
N.T.S.

DES.	SCALE N.T.S.
CHK.	DATE 7-23-87
F.B.	SHEET 1 OF 1
JOB NO. 00000	



200 W 34th St #613

STORAGE FACILITY FOR
TROXLER NUCLEAR DENSOMETER
PROD. #3411-B

Mark T. Johnson

Mr. Johnson has 14 years of diversified experience in the construction engineering field specializing in materials testing. Mark worked with the State of Alaska Dept. of Transportation for approx. 5 years as a resident inspector and materials technician. Mark was certified in 1978 by Troxler Laboratories and operated nuclear densometer 3401 and later the 3411 B and 2226 asphalt content gauge. He worked for 2 years with Straam Engineers in Portland, Oregon as a civil designer and resident inspector. Mr. Johnson worked for 2 years with Doug Construction Company of Salem, Ore. as a senior estimator. Mark then worked for 4 years with Dowl Engineers and Alaska Testlab as a materials technician and laboratory supervisor operating the Seamen nuclear densometer and the Troxler 2226 Asphalt content gauge. Mark also was responsible for training new personell with gauge operation. For the next 1 1/2 years Mark worked for Datum Engineers operating and training personell with the Troxler 3411 B gauges.

Marks education consists of high school at Juneau Douglas High School and engineering studies at Seattle University and Oregon State University.

Mr. Johnson is a licensed concrete and steel inspector and is licensed to own and operate nuclear densometers. He is a member of American Society of Testing Materials (ASTM) and has attended numerous seminars on soils, concrete, asphalt and steel. Mark is approved by the Corp of Engineers and the Municipality of Anchorage to perform materials testing and structural steel inspection. Mark has completley set up several mobile and permanent testlabs, including ordering and purching all equipment.

Mark has supervised up to 15 engineering technicians and has excelled in supervisory and communication skills. He is experienced in construction surveying and is proficiant in operating most survey equipment and has been utilized as instrument man and party chief.

Mark's diversified experience includes working on a number of types of projects including:

Roads, bridges, utilities, airports, small residential buildings, 20 story sky scrapers, Sewage treatment plants, water treatment plants, water and sewage distribution systems, ect. He is experienced with the frozen properties of soils and permafrost. He has made several geotechnical soils reports, and is experienced in subsurface investigations.

Mark is single and is in excellent health.

David K. Johnson

Mr. Johnson has been a resident of Alaska off and on for 20 years. He has 7 years of construction testing and inspection experience. David began working as an inspector for Anderson Division/Dresser Industries in Worcester, Mass. where he was responsible for in-line inspection of mass produced steel products such as arbors, hubs, wheels, ect. Mr. Johnson was responsible for acceptance and rejection of materials and experienced in the use of digital scales, calipers, micrometers, rpm meters ect. David has more recently been employed with Datum Engineers in Anchorage, Ak. where he has been responsible for construction materials testing. He is experienced in most phases of Soils, Concrete, Asphalt and Steel testing. Mr. Johnson is also experienced in construction surveying and has been utilized as chain man and instrument man. In 1986 David worked as a construction quality control person for Kelly-Ryan Construction on a Corp of Engineers project in Fort Greely, Alaska.

Mr. Johnson is a licensed user of the Troxler Nuclear densometers and experienced in use of other models.

David's education consists of graduation from High School in Holden Mass. and Studies at Boston College.

He has worked on a vast number of types of construction projects including highways, roads, buildings, airports, utilities ect.

David is single and in excellent health.

Mark Hansen

Mr. Hansen is recognized industry wide as the "expert" on concrete in Alaska. He has served as troubleshooter, consultant and expert witness for owners, contractors, engineers and architects. Mark's background experience began with Canyon Lands engineering in Richfield, Utah, as a project engineer for two years. He then worked for Dowl Engineer and Alaska Testlab as a geotechnical and materials engineer and laboratory manager from 1975 to 1985. During this period Mark was radiation protection officer and operated both Seamen and Troxler gauges. Mark then worked for McLane and Associates Inc. as project engineer in charge of geotechnical and testing services for one year.

Mark holds a B.S. degree in Civil and Environmental Engineering from Utah State University. He is registered as a professional engineer in the state of Alaska. He is registered as a trainer/examiner in the American Concrete Institute (ACI) technician certification program. Mark is a certified operator of nuclear densometer gauges.

Mr. Hansen's geotechnical experience includes subsurface investigations and foundation recommendations for bridges, roads, and buildings in Anchorage and throughout the State. Projects include bridges, schools, commercial buildings, warehouses, roads, highways, airports, gravel pits, and rock quarries. Arctic Experience includes many sites with permafrost, also artificially induced permafrost beneath cold storage plants and ice rinks.

Mark is married and has six children

TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

R. MARK HANSEN

of

Alaska Testlab

HAS SUCCESSFULLY COMPLETED THE TROXLER ELECTRONIC LABORATORIES, INC.
TRAINING COURSE FOR THE USE OF NUCLEAR TESTING EQUIPMENT.

SUBJECTS INCLUDED IN THIS COURSE WERE AS FOLLOWS:

Radiological Safety

1. Principles and practices of radiation protection.
2. Leak testing procedures.
3. Mathematics and calculations basic to the use and measurement of radioactivity.
4. Biological effects of radiation.
5. Radioactivity measurement standardization and monitoring techniques and instruments.
6. Accident and incident procedures.
7. Procedures for nuclear gauge storage and transportation.
8. General safety precautions.

Gauge Operation

1. Instrument theory
2. Operating procedures
3. Maintenance
4. Field application
5. Gauge calibration


INSTRUCTOR

5/4, 5, 6/82
DATE

W. F. TROXLER
PRESIDENT

TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

Mark T. Johnson

of

Constructors Testing Laboratory

HAS SUCCESSFULLY COMPLETED THE TROXLER ELECTRONIC LABORATORIES, INC.
TRAINING COURSE FOR THE USE OF NUCLEAR TESTING EQUIPMENT.

SUBJECTS INCLUDED IN THIS COURSE WERE AS FOLLOWS:

Radiological Safety

- | | |
|--|---|
| 1. Principles and practices of radiation protection. | 5. Radioactivity measurement standardization and monitoring techniques and instruments. |
| 2. Leak testing procedures. | 6. Accident and incident procedures. |
| 3. Mathematics and calculations basic to the use and measurement of radioactivity. | 7. Procedures for nuclear gauge storage and transportation. |
| 4. Biological effects of radiation. | 8. General safety precautions. |

Gauge Operation

- | | |
|-------------------------|----------------------|
| 1. Instrument theory | 4. Field application |
| 2. Operating procedures | 5. Gauge calibration |
| 3. Maintenance | |

Daniel R. Howe
INSTRUCTOR

April 5 & 6, 1978
DATE

William F. Troxler
PRESIDENT

TROXLER ELECTRONIC LABORATORIES, INC.

HEREBY CERTIFIES THAT

DAVID K. JOHNSON

of

DATUM ENGINEERING

HAS SUCCESSFULLY COMPLETED THE TROXLER ELECTRONIC LABORATORIES, INC.
TRAINING COURSE FOR THE USE OF NUCLEAR TESTING EQUIPMENT.

SUBJECTS INCLUDED IN THIS COURSE WERE AS FOLLOWS:

Rad:ological Safety

- | | |
|--|---|
| 1. Principles and practices of radiation protection. | 5. Radioactivity measurement standardization and monitoring techniques and instruments. |
| 2. Leak testing procedures. | 6. Accident and incident procedures. |
| 3. Mathematics and calculations basic to the use and measurement of radioactivity. | 7. Procedures for nuclear gauge storage and transportation. |
| 4. Biological effects of radiation. | 8. General safety precautions. |

Gauge Operation

- | | |
|-------------------------|----------------------|
| 1. Instrument theory | 4. Field application |
| 2. Operating procedures | 5. Gauge calibration |
| 3. Maintenance | |

Wm. J. Dutton
INSTRUCTOR

9/4/86

DATE

No 18685

W.F. TROXLER

PRESIDENT

70635